

Work Order ID 51752

September 2, 2009 8:32:28 AM



Page 1

Item ID: D2580-1

Accept



Setup Start



Revision ID: D

Stop



Item Name: 205 Skidtube bent detail

Start Date: 9/02/09 Start Qty: 2.00



Cust Item ID:

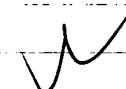
Required Date: 9/04/09 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:



Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description
--------------------------------	--------------------------

Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2580	Rev D

100 0.00



HandFinish

Memo

0.00

Hand Finishing 1- Inspect mat'l D2500-1-190 for damage.

2- Chemical Conversion Coat as per QSI 005 4.1

101 0.00



QC3- Inspect Part Finish

QC 0.00

Quality Control

Memo

DP 9-1-2

9-1-2

AWM
9-1-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 51752



Page 2

September 2, 2009 8:32:28 AM

Item ID: D2580-1

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Setup Start



Revision ID: D

Stop



Item Name: 205 Skidtube bent detail

Start Date: 9/02/09 Start Qty: 2.00



Cust Item ID:

Required Date: 9/04/09 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110



Skidtubes

Memo

0.00

2 0 - AWMS-9-2

Skidtubes

1-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid)

2-Open holes to 0.500" as per Dwg D2580 without cutting fluid

3-Deburr and blow out all chips from inside of tube

4-Bond web in place per QSI 015.

A/R Sikaflex-291 batch: M 112391
Sikaflex expire date: 10-02-09

Start time: 1:00 bond for 12hrs

130



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

9-9-10

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Work Order ID 51752

Page 3

September 2, 2009 8:32:29 AM

Item ID: D2580-1

Accept



Setup Start



Revision ID: D

Stop



Item Name: 205 Skidtube bent detail

Start Date: 9/02/09 Start Qty: 2.00



Cust Item ID:

Required Date: 9/04/09 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

**Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Draw
Number****Draw
Rev.****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

140



Packaging

Identify as per dwg & Stock Location:

L-G

0.00

L/G

- AWM 9-9-10

Packaging

Packaging

150



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

09/09/11 JJ

MF 09-09-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

September 2, 2009 8:32:27 AM

Work Order ID: 51752



Parent Item: D2580-1RevD



Parent Item Name: 205 Skidtube bent detail

Start Date: 9/02/09

Required Date: 9/04/09

Comments:

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2500-1-190RevU/R 		Manufactured 	No			100	Each	0.0000	2.0000		B - 50166 AWM 9-2-2010	(X)
Ext'n 1" Beam Tube 4"												
D2596RevD 		Manufactured 	No			110	Each	20.0000	2.0000		(2)	9-9-2 - AVM (X)
Web, 205 Skidtube												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	20	
51528	20	

AWM 9-7-2010 51528 (X2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>#</i>	DRAWN BY <i>RH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07.06.28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AEELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

*W/J
S1752***GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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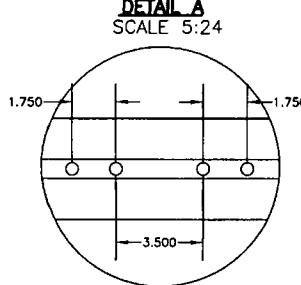
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

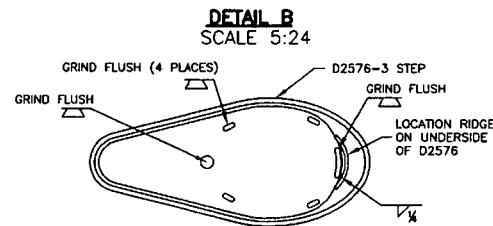
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

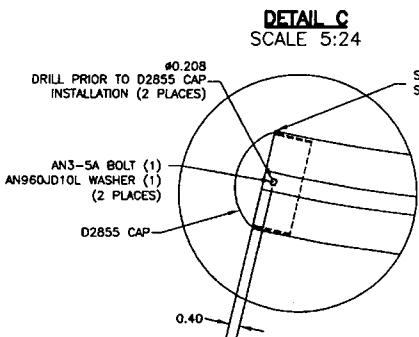
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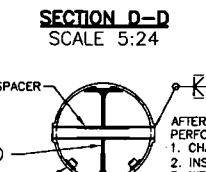
RELEASED
07-06-28-4



DETAIL B
SCALE 5:24



DETAIL C
SCALE 5:24



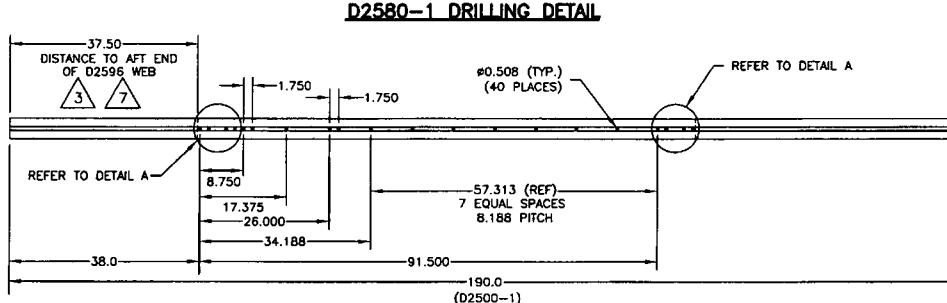
SECTION D-II
SCALE 5:24

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

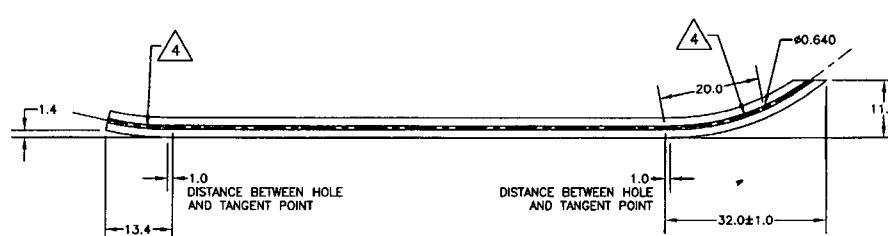
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

D2580-041 NOTES

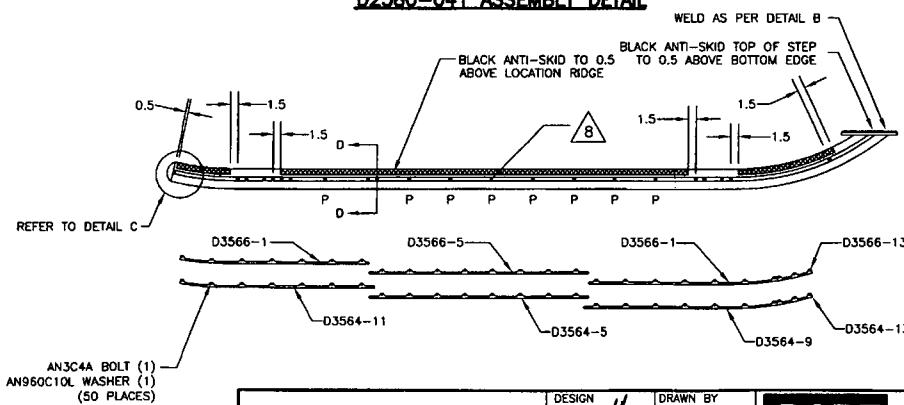
i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4



D2580-1 DRILLING DETAIL



D2580-041 ASSEMBLY DETAIL



51752

AN960C10L WASHER (1) (50 PLACES)		DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART	DART AEROSPACE LTD. HAWKSBURY, ONTARIO, CANADA	
596 WEB 005 4.3		COPYRIGHT © 1996 BY DART AEROSPACE LTD.	CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 2 OF 3
		THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

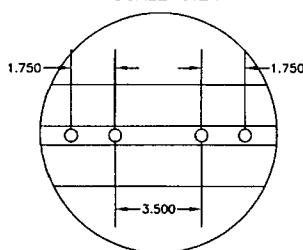
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

DETAIL E
SCALE 5:2

SCALE 5:24



RELEASED
07-06-28

DETAIL F
SCALE 5:24

SCALE 5:24

GRIND FLUSH (4 PLACES)

D2576-3 STEP

GRIND FLUSH

GRIND FLUSH

LOCATION RIDGE
ON UNDERSIDE
OF D2576

$\sqrt{4}$

DETAIL G

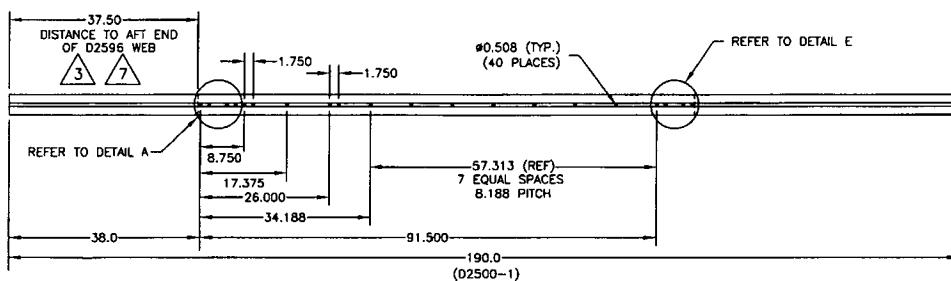
SECTION H-H
SCALE 5:24

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

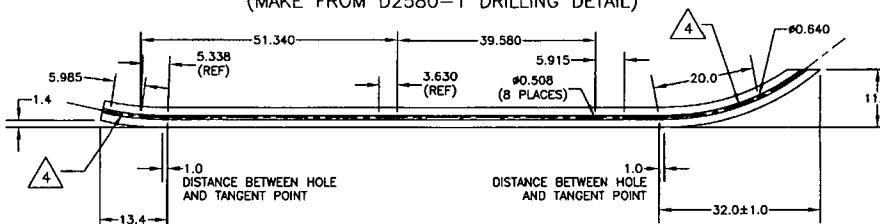
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

AN3C4A BOLT (1)
AN960C10L WASHER (1)
(50 PLACES)

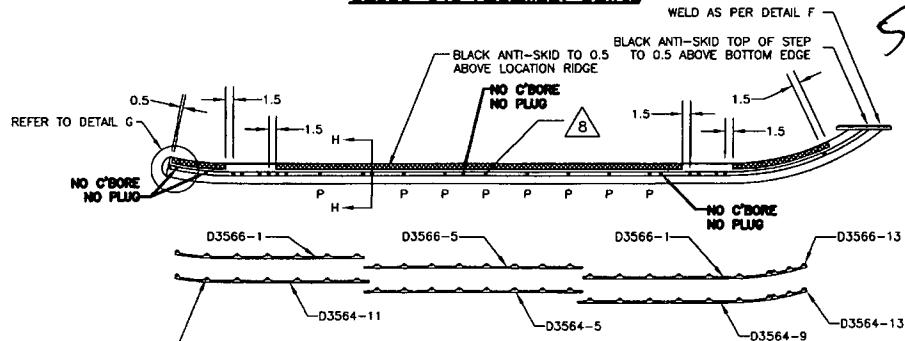
D2580-1 DRILLING DETAILS



D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



D2580-045 NOTES

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION.

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DESIGN <i>RH</i>	DRAWN BY <i>RH</i>	DART	DART AEROSPACE LTD. HAWKSBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 3 OF 3	
DATE 07.02.27	TITLE 205 SKIDTURE ASSEMBLY	SCALE 1:24		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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